

# STN Columbus

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America  
 NEWS 2 "Ask CAS" for self-help around the clock  
 NEWS 3 FEB 28 PATDPAFULL - New display fields provide for legal status  
 data from INPADOC  
 NEWS 4 FEB 28 BABS - Current-awareness alerts (SDIs) available  
 NEWS 5 MAR 02 GBFULL: New full-text patent database on STN  
 NEWS 6 MAR 03 REGISTRY/ZREGISTRY - Sequence annotations enhanced  
 NEWS 7 MAR 03 MEDLINE file segment of TOXCENTER reloaded  
 NEWS 8 MAR 22 KOREAPAT now updated monthly; patent information enhanced  
 NEWS 9 MAR 22 Original IDE display format returns to REGISTRY/ZREGISTRY  
 NEWS 10 MAR 22 PATDPASPC - New patent database available  
 NEWS 11 MAR 22 REGISTRY/ZREGISTRY enhanced with experimental property tags  
 NEWS 12 APR 04 EPFULL enhanced with additional patent information and new  
 fields  
 NEWS 13 APR 04 EMBASE - Database reloaded and enhanced  
 NEWS 14 APR 18 New CAS Information Use Policies available online  
 NEWS 15 APR 25 Patent searching, including current-awareness alerts (SDIs),  
 based on application date in CA/CAPLUS and USPATFULL/USPAT2  
 may be affected by a change in filing date for U.S.  
 applications.  
 NEWS 16 APR 28 Improved searching of U.S. Patent Classifications for  
 U.S. patent records in CA/CAPLUS  
 NEWS 17 MAY 23 GBFULL enhanced with patent drawing images  
 NEWS 18 MAY 23 REGISTRY has been enhanced with source information from  
 CHEMCATS  
 NEWS 19 JUN 06 STN Patent Forums to be held in June 2005  
 NEWS 20 JUN 06 The Analysis Edition of STN Express with Discover!  
 (Version 8.0 for Windows) now available  
 NEWS 21 JUN 13 RUSSIAPAT: New full-text patent database on STN  
 NEWS 22 JUN 13 FRFULL enhanced with patent drawing images  
 NEWS 23 JUN 20 MEDICONF to be removed from STN  
  
 NEWS EXPRESS JUNE 13 CURRENT WINDOWS VERSION IS V8.0, CURRENT  
 MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
 AND CURRENT DISCOVER FILE IS DATED 13 JUNE 2005  
  
 NEWS HOURS STN Operating Hours Plus Help Desk Availability  
 NEWS INTER General Internet Information  
 NEWS LOGIN Welcome Banner and News Items  
 NEWS PHONE Direct Dial and Telecommunication Network Access to STN  
 NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that  
 specific topic.

All use of STN is subject to the provisions of the STN Customer  
 agreement. Please note that this agreement limits use to scientific  
 research. Use for software development or design or implementation  
 of commercial gateways or other similar uses is prohibited and may  
 result in loss of user privileges and other penalties.

\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 18:51:46 ON 21 JUN 2005

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

## STN Columbus

	ENTRY	SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'CAPLUS' ENTERED AT 18:51:55 ON 21 JUN 2005  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
 COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 21 Jun 2005 VOL 142 ISS 26  
 FILE LAST UPDATED: 20 Jun 2005 (20050620/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s equal adj1 parts and nitric and sulfuric and hydrofluoric
    253330 EQUAL
      0 ADJ1
    669652 PARTS
      0 EQUAL ADJ1 PARTS
        (EQUAL(W)ADJ1(W)PARTS)
    157361 NITRIC
    127251 SULFURIC
    22385 HYDROFLUORIC
L1      0 EQUAL ADJ1 PARTS AND NITRIC AND SULFURIC AND HYDROFLUORIC

=> s "equal parts" and nitric and sulfuric and hydrofluoric
    253330 "EQUAL"
    669652 "PARTS"
      6884 "EQUAL PARTS"
        ("EQUAL"(W)"PARTS")
    157361 NITRIC
    127251 SULFURIC
    22385 HYDROFLUORIC
L2      0 "EQUAL PARTS" AND NITRIC AND SULFURIC AND HYDROFLUORIC

=> s nitric and sulfuric and hydrofluoric and atomic(w)(emission or absorption)
    157361 NITRIC
    127251 SULFURIC
    22385 HYDROFLUORIC
    558021 ATOMIC
    459420 EMISSION
    874150 ABSORPTION
      64711 ATOMIC(W) (EMISSION OR ABSORPTION)
L3      34 NITRIC AND SULFURIC AND HYDROFLUORIC AND ATOMIC(W) (EMISSION OR
        ABSORPTION)

=> s 13 and (temperature or heat?)
    526218 TEMPERATURE
    2211264 HEAT?
```

## STN Columbus

L4 9 L3 AND (TEMPERATURE OR HEAT?)

=&gt; d 1-9

L4 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

Full Text

AN 2005:155492 CAPLUS

DN 142:231994

TI Vessel for pretreatment of elementary analysis, method for analyzing elements, inductively coupled plasma torch and apparatus for elementary analysis

IN Kimura, Noboru; Kuniya, Joji; Arai, Masataka

PA Shin-Etsu Chemical Co., Ltd., Japan

SO Eur. Pat. Appl., 10 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1509067	A2	20050223	EP 2004-254949	20040818
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
	JP 2005061880	A2	20050310	JP 2003-207994	20030820
	US 2005040342	A1	20050224	US 2004-919443	20040817
PRAI	JP 2003-207994	A	20030820		

L4 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

Full Text

AN 2002:575522 CAPLUS

DN 137:118731

TI Method for analyzing impurities in a silicon substrate and apparatus for decomposing a silicon substrate through vapor-phase reaction

IN Shabani, Mohammad B.; Okuuchi, Shigeru

PA Mitsubishi Materials Silicon Corporation, Japan

SO U.S. Pat. Appl. Publ., 9 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002101576	A1	20020801	US 2001-775209	20010201
PRAI	US 2001-775209		20010201		

L4 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

Full Text

AN 2001:598246 CAPLUS

DN 135:156588

TI Determination of diffusion coefficient in quartz tubes for semiconductor manufg. heat treating equipment by metal analysis method

IN Marumo, Yoshinori; Suzuki, Kaname; Hayashi, Teruyuki; Tanahashi, Takashi

PA Tokyo Electron Ltd., Japan

SO PCT Int. Appl., 72 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001059189	A1	20010816	WO 2000-JP9381	20001228
	W: JP, KR, US				

## STN Columbus

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,  
PT, SE, TR  
EP 1261761 A1 20021204 EP 2000-985973 20001228  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, FI, CY, TR  
JP 2003522708 T2 20030729 JP 2001-558517 20001228  
US 2003000458 A1 20030102 US 2002-181980 20020724  
PRAI JP 2000-29807 A 20000207  
WO 2000-JP9381 W 20001228  
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

Full Text

AN 1999:426893 CAPLUS  
DN 131:96583  
TI The chemicals for sample melting for impurity analysis of semiconductor  
manufacturing device  
IN Huh, Yong-Woo  
PA Samsung Electronics Co., Ltd., S. Korea  
SO Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1  

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
PI JP 11183344	A2	19990709	JP 1998-206321	19980722
PRAI KR 1997-66288	A	19971205		

L4 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

Full Text

AN 1999:280589 CAPLUS  
DN 131:70668  
TI Development and evaluation of an analytical procedure for the  
determination of antimony in plant materials by hydride generation  
atomic absorption spectrometry  
AU Krachler, Michael; Burow, Mechthild; Emons, Hendrik  
CS Research Centre Julich, Institute of Applied Physical Chemistry, Julich,  
D-52425, Germany  
SO Analyst (Cambridge, United Kingdom) (1999), 124(5), 777-782  
CODEN: ANALAO; ISSN: 0003-2654  
PB Royal Society of Chemistry  
DT Journal  
LA English  
RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

Full Text

AN 1999:166209 CAPLUS  
DN 130:191166  
TI Acid dissoln.-alkali fusion-based method for analysis of impurity contents  
in silicon dioxide and natural quartz samples  
IN Kemmochi, Katsuhiko; Maekawa, Kiyotaka; Tsuji, Chuzaemon; Saitou, Manabu;  
Miyazawa, Hiroyuki; Watanabe, Hiroyuki  
PA Shin-Etsu Quartz Products Co., Ltd., Japan  
SO U.S., 6 pp.  
CODEN: USXXAM  
DT Patent  
LA English  
FAN.CNT 1

## STN Columbus

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5877027	A	19990302	US 1997-918133	19970827
PRAI US 1997-918133		19970827		

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

Full Text

AN 1999:112841 CAPLUS  
 DN 130:226728  
 TI Development of an international standard for the determination of metals and metalloids in workplace air using ICP-AES: evaluation of sample dissolution procedures through an interlaboratory trial  
 AU Butler, Owen T.; Howe, Alan M.  
 CS Inorganic Exposure Assessment Section, Health and Safety Laboratory, Broad Lane, Sheffield, S3 7HQ, UK  
 SO Journal of Environmental Monitoring (1999), 1(1), 23-32  
 CODEN: JEMOFW; ISSN: 1464-0325  
 PB Royal Society of Chemistry  
 DT Journal  
 LA English  
 RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

Full Text

AN 1998:192396 CAPLUS  
 DN 128:234347  
 TI Study on the pretreatment method for hazardous air pollutants monitoring. Rapid pretreatment with pressure container for nickel, arsenic etc.  
 AU Okuda, Tetsuya; Torii, Naruyuki; Takahashi, Kouzou; Hashikura, Kiyokazu  
 CS Environ. Sci. Inst. Mie Prefect., Yokkaichi, 510-8511, Japan  
 SO Mie-ken Kankyo Kagaku Senta Kenkyu Hokoku (1998), 18, 51-57  
 CODEN: MKKHE7; ISSN: 0388-2640  
 PB Mie-ken Kankyo Kagaku Senta  
 DT Journal  
 LA Japanese

L4 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

Full Text

AN 1998:23606 CAPLUS  
 DN 128:190007  
 TI Critical discussion on the need for an efficient mineralization procedure for the analysis of plant material by atomic spectrometric methods  
 AU Hoenig, M.; Baeten, H.; Vanhentenrijk, S.; Vassileva, E.; Quevauviller, Ph.  
 CS Centre d'Etude et de Recherches Veterinaires et Agrochimiques (CERVA), Belg.  
 SO Analytica Chimica Acta (1998), 358(1), 85-94  
 CODEN: ACACAM; ISSN: 0003-2670  
 PB Elsevier Science B.V.  
 DT Journal  
 LA English  
 RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=&gt; d 2 3 4 7 ab

L4 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

AB The method of this invention for analyzing impurities present in a silicon

substrate comprises the steps of accommodating a silicon substrate resting on a support, and a soln. for decomp. a silicon substrate which comprises a mixt. of hydrofluoric acid, nitric acid and sulfuric acid, in an air-tight reaction vessel, in such a way as to keep the silicon substrate from directly contacting with the decompn. soln.; allowing the decomp. soln. to vaporize, thereby causing the substrate to decomp. through vapor-phase reaction for sublimation, without heating or pressurizing the reaction vessel; and recovering the residue left by the decompd. substrate, to analyze the impurities contained in the substrate. This method makes it possible to det. highly precisely the content of impurities present in a silicon substrate in a comparatively short time by decomp. the substrate through vapor-phase reaction without resorting to heating or pressurization.

L4 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

AB Manuf. of quartz tube and anal. of metal (such as copper) content in quartz tube for semiconductor manufg. equipment capable of heat treating a substrate without causing contamination, are described. A quartz specimen is immersed in hydrofluoric acid to expose a layer to be analyzed located at a prescribed depth. On the exposed surface, a chem.-etching liq. such as hydrofluoric acid or nitric acid is dripped to decomp. only an extremely thin layer to be analyzed. The decompn. liq. is quant. analyzed by use of at. absorption spectroscopy or similar anal. method to measure the metal concn. in the decompn. liq. From the difference in thickness before and after etching and the area of dripped etching liq., the vol. of the etched layer is obtained. From the vol. of etched layer and metal content in etching liq., the metal concn. throughout the quartz sample is detd. as well as the diffusion coeff. for the layers analyzed. With the obtained diffusion coeff. as index, quartz material in which metal diffuses with difficulty is sorted out and a quartz tube for semiconductor manufg. equipment can be fabricated.

L4 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

AB The title method is suited for anal. of impurities in materials used for manufg. of semiconductor devices, such as quartz, silicon carbide, alumina, or zirconia. A sample of 0.1-0.3 g in a teflon container is mixed with 10-20 mL melting chems. which are made up by H<sub>2</sub>SO<sub>4</sub>, HF, and HNO<sub>3</sub> of various ratio, followed by repeated heating in a dry oven between 100-140°C and 200-260°C in a heating circle of 140-160 s elevation, 3-6 s holding, and 45-55 s temp. descending. After melting the mixt. is cooled to room temp. and dissolved by deionized water with a ratio of 10-20/80-90 (wt). The soln. is then used for detn. of impurities by at. absorption spectrometry.

L4 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

AB Inductively coupled plasma at. emission spectrometry (ICP-AES) is rapidly overtaking at. absorption spectrometry (AAS) as the method of choice for the detn. of toxic metals in workplace air. However, the few ICP-AES methods that have been published are not well characterized in terms of the effectiveness of the sample dissoln. procedures described and their validation status. The International Stds. Organization (ISO) is currently engaged in developing ISO 15202, which will describe a generic method for the detn. of metals and metalloids in airborne particulate matter by ICP-AES. One part of the proposed std. deals with dissoln. procedures. The ISO work has been supported by a project carried out in the authors' lab. to identify, develop and validate sample dissoln. procedures for inclusion in the proposed std. This paper describes an interlab. comparison carried out to assess the performance of selected procedures using samples of airborne particulate matter collected on filters with a multiport sampler. Five dissoln. procedures were tested. These included an ultrasonic agitation procedure, two hot-plate procedures (based upon NIOSH 7300 and OSHA ID 125G) and two microwave-assisted

## STN Columbus

procedures (based upon EPA 3052). It was shown that the dissoln. procedures selected for use in the trial and used internally at the Health and Safety Lab. generally gave equiv. performance. As expected, a wider spread of results was obtained by participants in the trial. More specifically, there exists some reservation regarding the ability of the ultrasonic and hot-plate procedures to attack fully on a consistent basis some resistant materials, e.g., chromium contg. particulate matter. Above all, the trial demonstrated the usefulness of microwave-assisted dissoln. procedures in a modern lab.

=> d his

(FILE 'HOME' ENTERED AT 18:51:46 ON 21 JUN 2005)

FILE 'CAPLUS' ENTERED AT 18:51:55 ON 21 JUN 2005

L1 0 S EQUAL ADJ1 PARTS AND NITRIC AND SULFURIC AND HYDROFLUORIC  
L2 0 S "EQUAL PARTS" AND NITRIC AND SULFURIC AND HYDROFLUORIC  
L3 34 S NITRIC AND SULFURIC AND HYDROFLUORIC AND ATOMIC(W) (EMISSION O  
L4 9 S L3 AND (TEMPERATURE OR HEAT?)

=> d 4

L4 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

### Full Text

AN 1999:426893 CAPLUS

DN 131:96583

TI The chemicals for sample melting for impurity analysis of semiconductor manufacturing device

IN Huh, Yong-Woo

PA Samsung Electronics Co., Ltd., S. Korea

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 11183344	A2	19990709	JP 1998-206321	19980722
PRAI	KR 1997-66288	A	19971205		

=>

	Type	L #	Hits	Search Text	DBs
1	BRS	L1	0	sufluric same nitric same (hf or hydrofluoric or hydrogen adj1 fluoride)	US- PGPUB ; USPAT; USOCR ; EPO; JPO; DERWE NT; IBM_TD B
2	BRS	L2	5974	sulfuric same nitric same (hf or hydrofluoric or hydrogen adj1 fluoride)	US- PGPUB ; USPAT; USOCR ; EPO; JPO; DERWE NT; IBM_TD B



	<b>Time Stamp</b>	<b>Comments</b>	<b>Error Definition</b>	<b>Errors</b>
<b>1</b>	<b>2005/06/21 17:54</b>			
<b>2</b>	<b>2005/06/21 17:54</b>			

	Type	L #	Hits	Search Text	DBs
3	BRS	L3	4106	2 and (dissolv\$3 or dissolution)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWE NT; IBM_TDB
4	BRS	L4	738	3 and semiconductor	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWE NT; IBM_TDB

	<b>Time Stamp</b>	<b>Comments</b>	<b>Error Definition</b>	<b>Errors</b>
<b>3</b>	<b>2005/06/21 17:55</b>			
<b>4</b>	<b>2005/06/21 17:55</b>			

	Type	L #	Hits	Search Text	DBs
5	BRS	L5	192	4 and contaminant	US- PGPUB ; USPAT; USOCR ; EPO; JPO; DERWE NT; IBM_TD B
6	BRS	L6	125	5 and (detect\$3 or analysis or analyze\$1)	US- PGPUB ; USPAT; USOCR ; EPO; JPO; DERWE NT; IBM_TD B

	<b>Time Stamp</b>	<b>Comments</b>	<b>Error Definition</b>	<b>Errors</b>
<b>5</b>	<b>2005/06/21 17:55</b>			
<b>6</b>	<b>2005/06/21 17:56</b>			

	Type	L #	Hits	Search Text	DBs
7	BRS	L7	979	3 and (dissolve\$1 or dissolution) same (nitric and sulfuric)	US-PGPUB; USPAT; USOCR; ; EPO; JPO; DERWE NT; IBM_TDB
8	BRS	L8	16	6 and 7	US-PGPUB; USPAT; USOCR; ; EPO; JPO; DERWE NT; IBM_TDB

	<b>Time Stamp</b>	<b>Comments</b>	<b>Error Definition</b>	<b>Errors</b>
<b>7</b>	<b>2005/06/21 17:56</b>			
<b>8</b>	<b>2005/06/21 18:07</b>			

	Type	L #	Hits	Search Text	DBs
9	BRS	L9	143	2 and atomic adj1 (absorption or emission)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWE NT; IBM_TDB
10	BRS	L10	73	9 and (silicon adj1 carbide or quartz or zirconium)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWE NT; IBM_TDB
11	BRS	L11	1	("5877027").URPN.	USPAT
12	BRS	L12	1	("5063179").PN.	US-PGPUB; USPAT; USOCR



	<b>Time Stamp</b>	<b>Comments</b>	<b>Error Definition</b>	<b>Errors</b>
<b>9</b>	<b>2005/06/21 18:07</b>			
<b>10</b>	<b>2005/06/21 18:08</b>			
<b>11</b>	<b>2005/06/21 18:32</b>			
<b>12</b>	<b>2005/06/21 18:58</b>			

	Type	L #	Hits	Search Text	DBs
13	BRS	L13	0	"2002010576"	US- PGPUB ; USPAT; USOCR
14	BRS	L14	1	"20020101576"	US- PGPUB ; USPAT; USOCR

	<b>Time Stamp</b>	<b>Comments</b>	<b>Error Definition</b>	<b>Errors</b>
<b>13</b>	<b>2005/06/21 18:59</b>			
<b>14</b>	<b>2005/06/21 18:59</b>			